



NSW GOVERNMENT
Department of Planning

MAJOR PROJECT ASSESSMENT
Gullen Range Wind Farm



Director-General's
Environmental Assessment Report
Section 75I of the
Environmental Planning and Assessment Act 1979

March 2009

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EXECUTIVE SUMMARY

Gullen Range Wind Farm Pty Ltd (the Proponent) a fully owned subsidiary of Epuron Pty Ltd, is seeking the Minister for Planning's approval for the construction and operation of up to 84 wind turbines on the Gullen Range, in Southern Tablelands of NSW. The turbines will be capable of generating up to 278 megawatts (MW) of electricity, based on potential range of generating capacities up to 3.3 megawatts. The wind turbines and associated facilities will be located wholly within the Upper Lachlan local government area. The project includes:

- construction of up to 84 wind turbines, with blades of up to 105 m long mounted on tubular steel towers up to 85 m high at the hub (total turbine height of up to 135 m);
- electrical connections between wind turbines using a combination of underground cables and overhead concrete or timber power poles;
- substation and transmission connection linking the wind turbines to the existing TransGrid 330kV Yass-West Sydney transmission system which crosses the site;
- onsite control room and maintenance facilities;
- internal access roads and minor upgrades to the local road network, for installation and maintenance of wind turbines; and
- temporary construction infrastructure including possibly two concrete batch plants, site office and facilities.

The project would generate renewable electricity under the Federal Government's proposed expansion of the Mandatory Renewable Energy Target (MRET) which includes a target of 45 000GWh by 2020. This electricity would offset carbon emissions produced by fossil-fuelled power plants. The project has a capital value of \$250 million. It would employ approximately 180 people during construction and up to 15 during the operational phase of the project.

A total of 68 submissions were received during the public exhibition of the Environmental Assessment for the project, the majority of which objected to the project. Key issues raised in submissions included: operational noise from the turbines; visual and landscape impacts; impacts on ecology; conflicts between the project and the safe operation of Crookwell Airfield; justification for the project; and impacts to property values and the quality of life for local residents. A Submissions Report, prepared by the Proponent, addressed the issues raised in the submissions on the Project.

The Department considers the impacts to Crookwell aerodrome at the site to be unacceptable and therefore recommends the removal of 11 turbines from the scope of the project. In doing so, the Department has applied a precautionary approach to ensure that the aerodrome can continue to operate in a safe manner for all potential users of this infrastructure.

In addition the Department has recommended that the Proponent be required to undertake further investigations into the dispersion of juvenile Powerful Owls before it is permitted to operate turbines in the Pomeroy section of the project during dispersion periods. This approach will ensure that the project does not operate in a manner that can potentially affect this threatened species unless and until the Proponent conclusively demonstrates that there will not be a conflict between the project's operation and the dispersion of juveniles in the area.

Seven proposed turbines lie adjacent to an approved subdivision with dwelling entitlements. The Department considers that noise impacts will be unacceptable if the project proceeds concurrently with the landowner acting on the dwelling entitlements. To resolve this potential conflict, the Department has recommended that the Proponent be required to acquire the affected properties at the request of the landowner. This will ensure that the landowner's interests are protected should the turbines along the boundary of the site proceed.

Subject to the above recommendations the Department has assessed the merits of the Project and considers the site to be suitable for the proposed development. Aside from the above concerns the Department considers all other residual impacts can be suitably managed and mitigated through the recommended conditions of approval. The recommendations cover on-going compliance mechanisms, independent reviews, community consultation and complaints management, performance standards, environmental management and performance audits.

The Project will provide a range of benefits, while the potential impacts are considered to be manageable and is therefore in the public interest. Consequently, the Department recommends that the project be approved, subject to project modifications and the conditions of approval.

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1. BACKGROUND

1.1 Location

The proposed Gullen Range Wind Farm is located in Kialla, Bannister, Pomeroy and Gurrundah, generally between Crookwell and Goulburn, in the Southern Highlands (refer to Figure 1). Gullen Range rises approximately 200 metres above the surrounding valleys at an elevation of approximately 900 metres above sea level. The topography includes a series of rolling hills which form a ridgeline orientated in a north-west south-east direction. The total site area extends over approximately 22 kilometres of the range, covering 3400 hectares. It is characterised by grassland ridges and flats with woodland patches of various size and conservation value. The site is approximately 75% within the Hawkesbury Nepean Catchment and 25% within the Lachlan Catchment.

Figure 1 shows access to the site via the Hume Highway (nearest major arterial road). Crookwell Road (originating in Goulburn) and Grabben Gullen Road (originating in Gunning) border the proposed development north to Crookwell. Access to the northern section of the site is gained via Kialla Road. Access to the central section of the project is via Range Road and Bannister Lane. Access to the Pomeroy site is via Storriers Lane and access to the southern Gurrundah site is via Gurrundah Road.

1.2 Surrounding Land Uses

The project site is currently owned by 15 separate landowners, as indicated in Figure 2. The Proponent proposes to enter into 20-30 year lease agreements with these landowners.

The site is within and adjacent to agricultural areas primarily used for sheep and cattle grazing. The Crookwell Airstrip is approximately 2.5 kilometres north east of the site. The airstrip is currently utilised by the NSW Rural Fire Service, emergency medical services, local agricultural pilots, recreational pilots and flight training schools predominantly based in Sydney.

The township of Crookwell is located six kilometres to the north and has a population of approximately 2497 residents (as per 2006 census). Goulburn is located 25 kilometres south east of the site and has a population of 20127 (as per 2006 census data).

A wire free transmitter that provides local broadband service to the Crookwell area is located on the proposed site at Bannister. Running west to east between the northern and southern project sites is a TransGrid 330kV transmission line that originates in Yass and runs to West Sydney over the Southern Tablelands.

The Kialla, Bannister, Pomeroy, Gurrundah areas and surrounds are currently experiencing a demand for rural residential allotments. BarraGurrundah, an estate adjacent to the proposal, is an example of a property which has recently received approval from Council for subdivision.

Figure 1 - Proposed Wind Farm Site

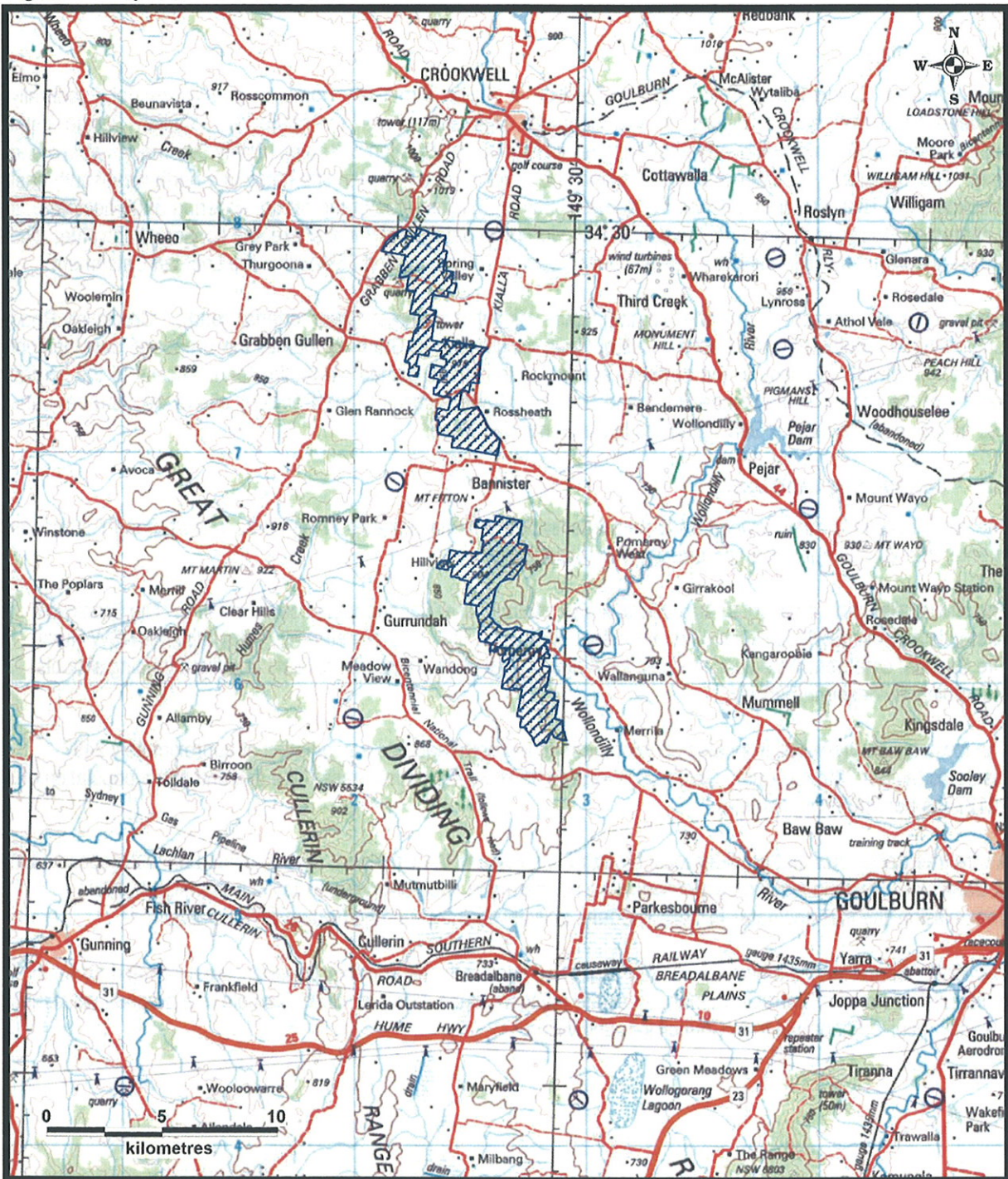
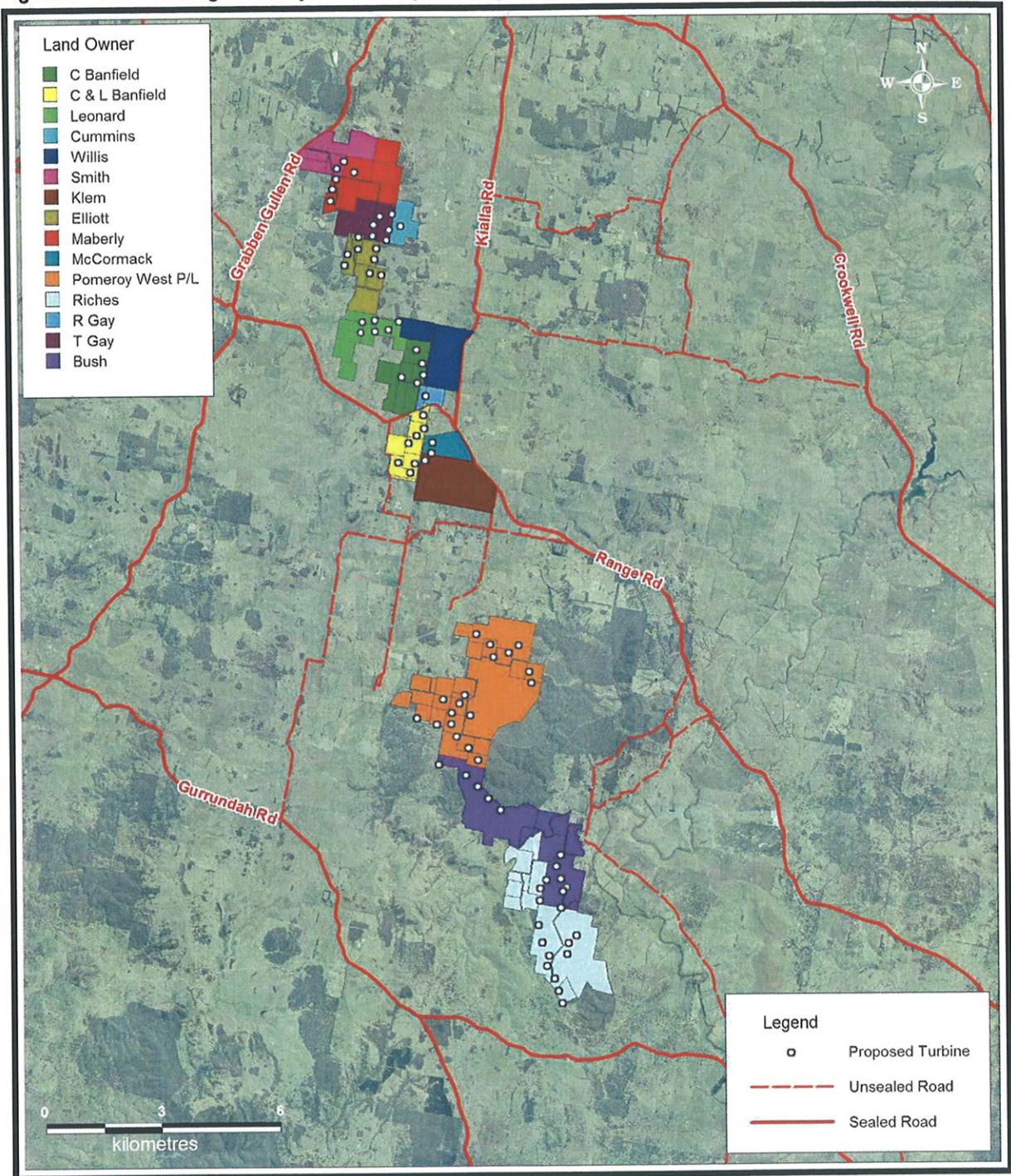


Figure 2 – Landholdings Directly Affected by the Project



2. PROPOSED DEVELOPMENT

2.1 Project Description

The Proponent seeks the approval of the Minister for Planning for the construction and operation of up to 84 wind turbines on the Gullen Range, Southern Tablelands of NSW. The project has a capital investment value of \$250 million and would employ approximately 180 people during construction and up to 15 during operation. Construction is proposed to occur over a 12-24 month period. The turbines will be capable of producing up to 278 megawatts (MW) of electricity. The turbines have an expected economic life of 20 to 30 years after which they would be removed from the site, or recommissioned. However, this proposal does not include recommissioning options. Key components of the project are summarised in the table below.

Table 1 - Key Project Components

Project Element	Description
Wind turbines, nacelle and blades	The wind turbines will be a three bladed type of the "up-wind" design, i.e. facing up into the wind and in front of the tower. The nacelle is mounted at the top of the tower and encloses the generator, gearbox and control gear including motors, pumps, brakes and electrical components. The tubular steel towers have a hub height of up to 85 metres, tapering from around 5 metres at the base width to around 3 metres at the top. The turbines will have a total height of up to 135 metres with the blade tip at its apex. The blades are up to 105m in diameter. Final turbine selection will be carried out through a competitive tender process subsequent to project approval. Each wind turbine would have a rated capacity between 1.5 and 3.3 MW.
Footings	The turbines will be anchored to the ground in reinforced concrete footings. Various designs of footings are under consideration based around a gravity footing (where subsoil geology is less stable) and rock-bolted footing (where subsoil geology provides good bedrock). A combination of these footing designs may be used.
Electrical substation	A substation is proposed to convert power from on-site reticulation voltage of 22kV or 33kV to a transmission voltage of 330kV suitable for connection to the TransGrid 330kV transmission line. The substation is approximately 200m x 150m in area and will be located in the Pomeroy area close to the TransGrid line.
Onsite electrical reticulation	Each wind turbine will be connected to the Site Substation using underground cabling. The trench for underground cables would be approximately 1-1.5 metres deep and 0.5-1 metre wide. Cable trenches would be dug, where possible, within onsite roads. Overhead cabling will link Pomeroy and Gurrundah sections and possibly Kialla to Bannister. Routes for power reticulation have not been finalised.
Onsite Control building	This building will house the control and communications equipment. As well as routine maintenance stores.
Concrete batching plants	Possibly 2 plants, of size 100 metres x 75 metres containing the loading bays/hardstands, hoppers, cement and admixture silos, water tank, sand and aggregate stockpiles. The maximum concrete produced by each plant would be 850 tonnes per day operating for 12 months. Proposed sites would be at Pomeroy and Gurrundah.
Access tracks	These would be unsealed formations up to 6m wide and are required to the base of each turbine location and to the Site Substation and Control building.
Construction Infrastructure	Temporary construction infrastructure including a site office and facilities.

2.2 Proposed Turbine Layouts

The Proponent has identified an indicative turbine layout (illustrated in Figure 3 and Figure 4), subject to final turbine selection. In order to adhere to noise level constraints set by the Department in the Director General's Requirements, the proponent has requested flexibility in the turbine layout allowing micro-siting of turbines within 250 metres of the indicative turbine layout. This flexibility was raised as a significant concern in a number of submissions on the project, particularly in the context of the potential for the Proponent to unilaterally shift turbines by up to 250 metres from the locations considered by stakeholders and presented in the Environmental Assessment. The Department supports concerns raised by submitters in this regard, and considers that this level of 'flexibility' detracts from the certainty and finality of any project approval that may be granted. As such, the Department has recommended that the Proponent be expressly prohibited from relocating wind turbines by 'up to 250 metres' in this manner. It should be noted that notwithstanding this prohibition, the *Environmental Planning and Assessment Act 1979* permits the Proponent to make minor amendments to the project where such amendments would not be inconsistent with the approved project, or to seek the Minister's approval to modify the approval if the amendments are in fact deemed to be inconsistent. The Department considers that these existing provisions of the legislation are the appropriate means for dealing with any necessary shift in turbine locations, rather than the 'flexibility' mechanism suggested by the Proponent in the Environmental Assessment.

2.3 Project Need and Benefits

The Proponent has argued that the project will result in the following benefits:

- production of up to 588,000 MWh of renewable electricity per year, sufficient for the average consumption of up to 73,500 homes;
- reduction in greenhouse gas emissions of up to 588,000 tonnes of carbon dioxide (equivalent) per year. This equates to removing 117,600 cars from our roads over the envisaged life of the project;
- savings in water consumption of 774 million litres per annum of potable water used in coal fired power stations;
- annual savings in pollution from coal fired power stations of up to 3,150,000 kilograms of sulphur dioxide, up to 1,405,000 kilograms of nitrogen oxides, and 88,200 kilograms of particulates;
- provision of a community fund of \$75 000 annually for local community and environmental projects;
- provision of local jobs and injection of up to \$200 million into the Australian economy and approximately \$60-\$90 million into the local economy; and
- improved security of electricity supply through diversification.

The Project will provide renewable energy under the Commonwealth Government's intended National Renewable Energy Target (RET) scheme¹. The wind farm will not increase electricity prices for NSW residents or businesses as the full costs of RET have been taken into account by electricity retail companies in their power supply prices.

A number of submission on the project raised concern over the need and justification arguments for the project, including:

- The greenhouse gas reductions listed in the Environmental Assessment do not in fact lower greenhouse gas emissions from current fossil fuel burning power generators; and
- demand for evidence that wind energy is a reliable and efficient form of electricity production;

Wind power is a clean, renewable form of energy that produces little carbon dioxide (CO₂) emissions during operation. Greenhouse gas savings associated with wind farms are usually presented as the proportion of CO₂ that is saved from being generated by fossil fuel power generators. In NSW, currently around 90% of our electricity needs are provided by non-renewable coal-fired power stations and as such, contribute the greatest share of base load production and CO₂ emissions. The remaining 10% is produced from alternative sources including gas/distillate power stations as well as hydro electric power.

¹ The Commonwealth Government's intends to expand its Mandatory Renewable Energy Target (MRET) scheme, which includes a legislated target of 9 500 gigawatt-hours (GWh) in 2010 to a national Renewable Energy Target (RET) scheme which includes a target of 45 000 GWh in 2020. The expanded scheme will deliver the Government's commitment that the equivalent of at least 20 per cent of Australia's electricity supply is generated from renewable sources by 2020. The national RET scheme is being designed in cooperation with the States and Territories through the Council of Australian Governments (COAG) and brings the existing MRET and existing state-based targets into a single national scheme.

The Proponent has utilised the 2006 greenhouse gas emissions co-efficient produced by the NSW Greenhouse Gas Office to establish the amount of greenhouse emissions that would be saved. The annual pool value for 2006 was 0.969 Tonne CO₂/MWh. The wind farm is expected to produce 588,000 MWh of electricity per annum. Utilising the pool value, 569,772 tonnes of CO₂ would be saved from the burning of coal. The Proponent has approximated the pool value to 1.0 and assumed that 100% of electricity in NSW is generated by coal fired power stations. In light of the above figures, 588,000 tonnes of carbon dioxide, may be higher than actually achieved but not excessively so. Objections have been raised stating that these figures are not accurate especially since electricity generated from wind is variable.

The interaction of wind farms with other forms of generation, distribution and interconnections in the National Electricity Market (NEM) is relatively complex. Given the highly dynamic nature of the interaction of wind farms and NEM generators, a detailed analysis would be required to determine the effective level of avoided greenhouse emissions. This would also be impacted by a range of factors such as the proportion of wind generation to total NEM generation, geographic dispersion of wind farms, wind and weather patterns and the level and timing of wind generation during the demand profile. For this reason, it is not possible to be precise about the greenhouse gas savings for the project. While the displacement ratio may not necessarily be 1:1, it is indicative of the savings in greenhouse gas emissions. The Federal Government has recently released the *Renewable Energy (Electricity) Bill 2009* that advocates an increase in the current Mandatory Renewable Energy Target. The revised Renewable Energy target is to have 20% of Australia's electricity supply generated from renewable sources by 2020. This target represents the Federal Government's belief in the use of renewables as a means of mitigating against climate change. The NSW government supports this position and therefore supports the development of renewable energy infrastructure in the state.

Objections have also stated that no coal fired power plant will close due to the building of a wind farm and that it will only provide a negligible replacement of the current means of generating electricity. As stated in the EA, the relative scale of this project would not result in the closing down of any existing power stations, however the Department in line with Commonwealth and State policies agrees with the Proponent that it would provide a positive effect in helping to reduce future greenhouse gas emissions from fossil fuel power generators. The National Electricity Market Management Company (NEMMCO) is responsible for scheduling generators to ensure that the electricity supply is maintained within specific frequency limits and has been addressing issues relating to wind generation. NEMMCO has noted that wind farm generation will occur at different times in the NEM demand profile and therefore wind generation will cause different types of generation to be backed off at different times. It would therefore be displacing open cycle gas turbines (OCGT) and combined cycle gas turbines (CCGT) at various times during the day and probably coal-fired generators at night. It is also noted that large coal-fired generators are able to reduce their output and in doing so consume proportionally less coal (although with lower generation efficiency than full output).

Concerns were also raised in submissions with regard to the efficiency and reliability of wind farms particularly because of differences in wind regimes, topographic features and transmission constraints. Calculation of energy production for the proposed wind farm was based on wind speeds measured at the site; on turbines likely to be used at the site; and on the operating conditions likely to occur at the site. The Proponent indicated that as developers, it is in their interest that the energy calculations are conducted in a way that maximises reliability and builds in a level of conservatism to ensure that the estimates are likely to be met. The capacity or utilisation factor of 35%- 45% estimated by the Proponent is consistent with the standard level accepted by the Department of Water and Energy for wind farm efficiency

The "reliability" of wind turbines depends on their availability factor which is the proportion of the time that the wind turbine is available to operate. The Proponent advised that modern wind turbines are sold with availability guarantees of around 95-98%, which means that the manufacturers warrant this operational capacity, including their scheduled maintenance.

Concerns were also raised by submitters in relation to the need for building more OCGT plants to back-up the energy variability produced by wind farms, NEMMCO indicates that the highest 10 per cent of demand during 2006/07 occurred for less than two per cent of the time. This suggests that back-up capacity will not be required to run for any extended time and therefore the related greenhouse emissions do not equal the electricity output of

an equivalent wind farm. It should be noted that every megawatt of wind generation does not need an additional megawatt of back-up generation so that the load demand can be met when there is no wind. There is already sufficient generation in the NEM to meet peak demand.

The benefits of wind farms in their ability to offset greenhouse gas emissions from current and future fossil fuel power generators has been explained in this section. The efficiency and reliability of wind farms is also in evidence. Currently the grid system of NSW has a capacity built in to ensure that variability in electricity output from wind farms can be absorbed by the Grid. As demonstrated no new fossil fuelled plants will need to be built in order to offset the operational variability of wind farms. The Department considers the arguments presented in this section outweigh the concerns raised against the justification for wind farms. A stated purpose of the Commonwealth Government is to lower the nation's carbon emissions. This section details how wind farms assist in this measure and therefore the Department is supportive of such measures.

Figure 3 - Turbine Layout (North)

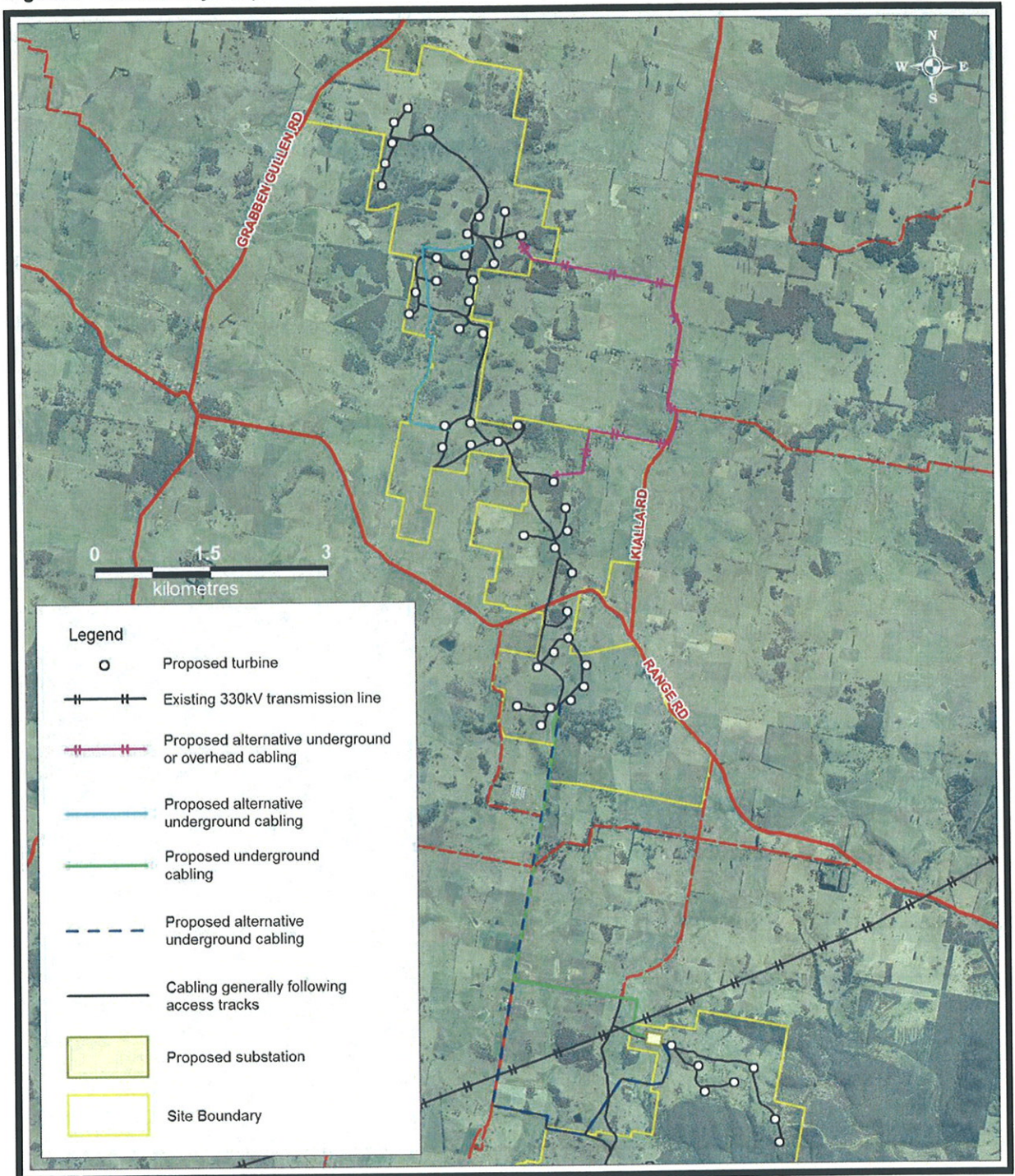
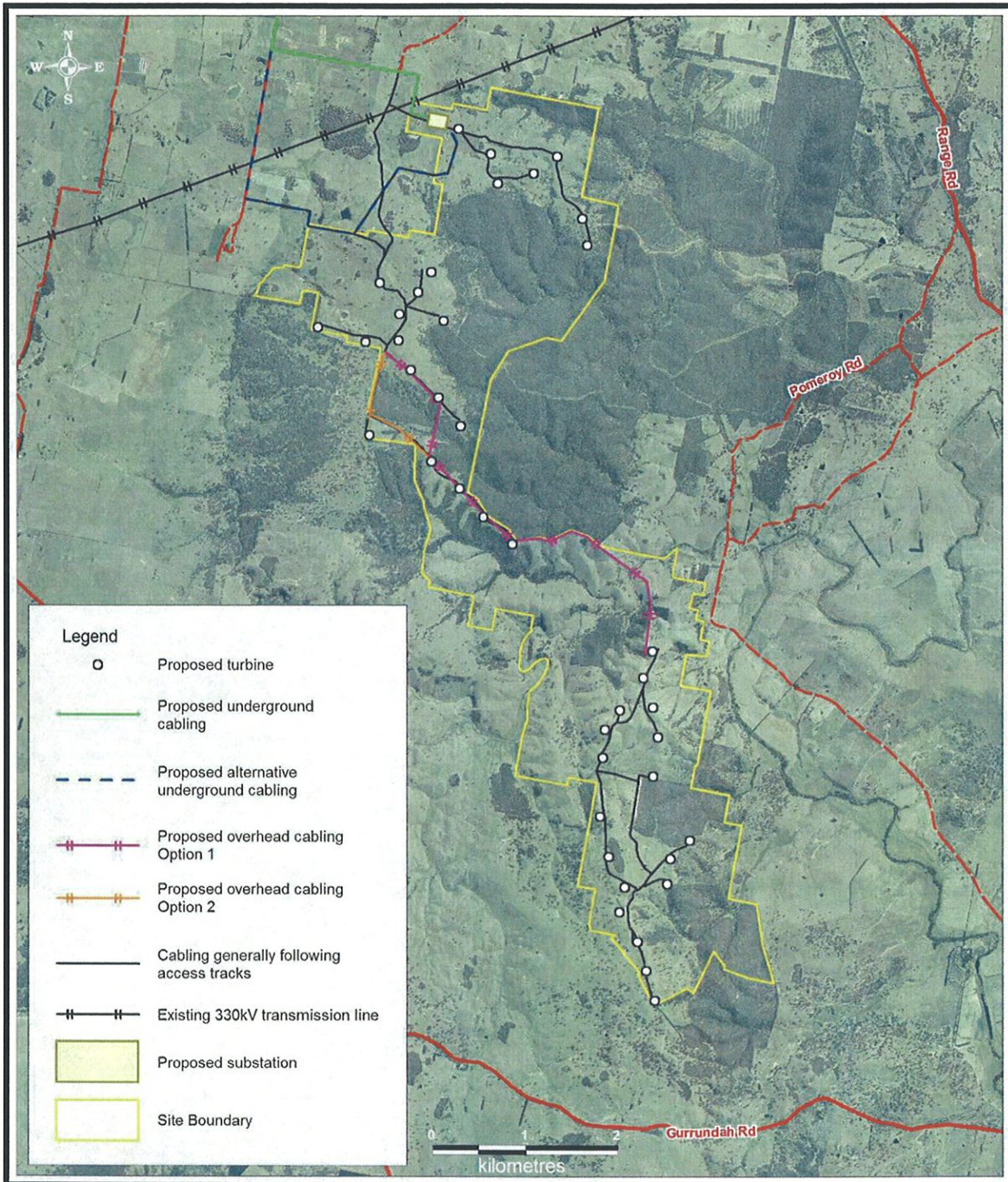


Figure 4 - Turbine Layout (South)



2.4 Amendments to the Project

Through the assessment process, a number of amendments have been made to the project. These amendments include those initiated by the Proponent, and those now recommended by the Department as conditions of approval.

Amendments to the project made by the Proponent in response to issues raised in submissions can be generally summarised as follows:

- **Aviation Impacts:** The Proponent would notify known users of Crookwell and Ashwell aerodrome of the final location of the wind turbines. The Proponent with assistance from its specialist aviation consultant would assist the aerodrome operator and/or local aircraft operators to develop or amend procedures for safe operations on or within the vicinity of the aerodrome, taking into account wind turbine locations.
- **Biodiversity Impacts:** Any loss of native vegetation during works would be offset in perpetuity by the Proponent. The Proponent would commit to offsets determined by suitably qualified experts on the basis of the quantum of vegetation to be removed, pending development of the final infrastructure layout. The Proponent would also locate the electricity corridor required at the Gurrundah property utilising option 2 to minimise vegetation disturbance (refer to Figure 4). Pre-construction surveying would be undertaken to assist in managing bird and bat impacts (the Powerful Owl would be a key species in this pre-construction surveying). Results would be incorporated into the proponent's ongoing monitoring program. If mortalities exceed a pre-determined threshold, additional mitigation measures would be considered. Additional targeted surveying would be carried in a Gurrundah Native Grassland area likely to be impacted by wind turbine and infrastructure development, in order to establish if the threatened Grassland Earless Dragon utilises this area.
- **Impacts to Subdivision:** In the case of Future Rural Subdivisions, the Proponent will provide reasonable and feasible noise mitigation measures to achieve the noise criterion outline in the *Guidelines for Community Noise* (WHO, 1999).
- **Alternative Site Access Routes:** Alternative site access off Prices Lane to Pomeroy will be utilised by the proponent. The alternative haulage route would be prepared in consultation with the Department of Planning, Local Council and the Department of Lands and presented in the Construction Environmental Management Plan.
- **Water Impacts:** No groundwater would be sourced without relevant permits being sought. Geotechnical investigations would be undertaken to ensure that the project would have no material adverse effect on groundwater/aquifers.

The Department, as a result of the outcomes of its assessment of the project, has recommended a series of conditions of approval, some of which will or may affect the scope of the project and the number of turbines that will be implemented as part of the project. These amendments are considered in more detail in section 5 of this report, and are summarised below:

- **Operation of Crookwell Aerodrome:** The Department has assessed the aviation hazards posed by the project in the vicinity of the aerodrome and considers the current operational and safety level of the aerodrome should be maintained. In particular vital emergency services currently operating from the aerodrome should not be adversely impacted by the proposal. In order for this to occur the Department recommends wind turbines need to be situated outside of the flight circuit utilised by emergency services. This involves the deletion of wind turbines from the entire Kialla portion and also the northern section of the Bannister proposal, a total of 11 wind turbines.
- **Biodiversity Issues:** To ensure the protection of the threatened Powerful Owl population adjacent to the Pomeroy site, the Department recommends the wind farm operation at Pomeroy be halted during times of juvenile owl dispersion from their home range so as to avoid adverse impacts. The Proponent is only permitted to operate these turbines during juvenile dispersion if it can conclusively demonstrate through further ecological investigations that this species will not be adversely affected by the project. This has the potential to affect four turbines.
- **Subdivision:** Development consent for a 20 lot subdivision with site specific dwelling entitlements has been granted prior to this approval on land adjacent to the Pomeroy West portion of the proposed development. The Department recommends that the affected land owner be able to request that the Proponent acquire the affected subdivided lots if it proceeds with the seven turbines near the site boundary.

The net effect of the Department's recommended amendments to the project will be the definite removal of 11 turbines from the project (total project generating capacity up to 241 MW), reducing the project from 84 to 73 turbines in total. The Proponent may also choose not to implement the further 11 turbines identified above (in relation to Powerful Owl and subdivision issues), thereby reducing the project further to 62 turbines (generating capacity of up to 205 MW).

3. STATUTORY CONTEXT

3.1 Major Project

On 13 June 2007, the Director-General of the Department of Planning, as delegate of the Minister for Planning, formed the opinion that the proposed development is a project to which Part 3A of the *Environmental Planning and Assessment Act 1979* applies. That is, it met the criteria for major projects under Schedule 1, Group 8, clause 24 of *State Environmental Planning Policy (Major Projects) 2005*, this being development for the purpose of a wind electricity generation facility with a capital investment value of more than \$30 million.

3.2 Critical Infrastructure Project

On 26 February 2008, the then Minister for Planning declared development for the purpose of energy generating facilities with capacity to generate at least 250MW to be critical infrastructure projects under section 75C of the *Environmental Planning and Assessment Act 1979* (if an application is made prior to 1 January 2013).

The Proponent has lodged an application for the project and has argued that the project is a critical infrastructure project by virtue of the abovementioned declaration. In particular, the Proponent has asserted that the project, if fully implemented at the maximum proposed turbine capacity would lead to a total project capacity of 278 MW. As this exceeds 250 MW, the Proponent considers that the project is a critical infrastructure.

The Department considers that the arguments made by the Proponent in this regard are problematic, particularly in the context of the total range of generating capacities that may in fact be implemented by Proponent. The project, as implemented, may in fact be considerably less than the 250 MW threshold to be considered critical infrastructure, depending on the final turbine capacity chosen. Further, at the time of the application (and as part of the Environmental Assessment), the Proponent had not clearly and conclusively demonstrated that the project met the threshold to be considered as critical infrastructure. The Department clearly expressed its concern in relation to this issue at the adequacy review stage, and through formal correspondence indicated a desire for the Proponent to frame its project application (and associated documentation) in a manner that put the issue of critical infrastructure (or otherwise) beyond doubt. The Proponent has not accepted the Department's advice in this regard and has continued to seek approval for a wind farm with a range of generating capacities that spanned the 250 MW threshold. The Department accepted, exhibited and handled the Environmental Assessment for the project in a manner consistent with that applied to critical infrastructure projects (including identification of the project as a critical infrastructure project) in formal notifications with the expectation that the issue of whether the project was in fact critical infrastructure would be resolved as the assessment process progressed. In this context, the Department indicated to the Proponent at the adequacy review stage that if the Minister removed turbines from the project as part of any approval (as has been done previously for other wind farm proposals), then there would be a distinct possibility that the project would not be considered critical infrastructure at the time of determination.

This is in fact the current situation with the subject project application. Irrespective of whether the project was or should have been considered as critical infrastructure at the time of making the application (or more relevantly, at the time of making the critical infrastructure declaration on 26 February 2008), it is clear that the project will not meet the 250 MW threshold at the time of determination. The Department has recommended that 11 turbines be removed from the project due to concerns over potential aviation hazards, thereby reducing the generating capacity of the project to below 250 MW, regardless of the final generating capacity of each turbine (within the range identified by the Proponent for this project). It is the Department's contention, therefore, that the project is not critical infrastructure at the time of determination and the statutory provisions that would otherwise apply to a project approval for critical infrastructure do not apply to the subject project (assuming that the Minister agrees to the deletion of 11 turbines from the project as part of the project approval).

3.3 Environmental Planning Instruments

There are no applicable environmental planning instruments that substantially govern the carrying out of the project. It is noted that the project lies on land zoned 1(a) Rural the three relevant local environmental plans (*Gunning Local Environmental Plan 1997*, *Mulwree Local Environmental Plan 1995* and *Crookwell Local Environmental Plan 1994*) and is permissible with consent under *State Environmental Planning Policy (Infrastructure) 2007*.

3.4 Exhibition, Notification and Statutory Requirements

The Environmental Assessment for the project, deemed to adequately address the Director-General's requirements in July 2008, was publicly exhibited and submissions invited between 4 August 2008 and 5 September 2008. At the request of the local council, the Department agreed to accept late submissions up until 29 September 2008.

Following the exhibition period, the Director-General directed the Proponent to respond to the issues raised in submissions. The Submissions Report prepared by the Proponent was subsequently made publicly available on the Department's website.

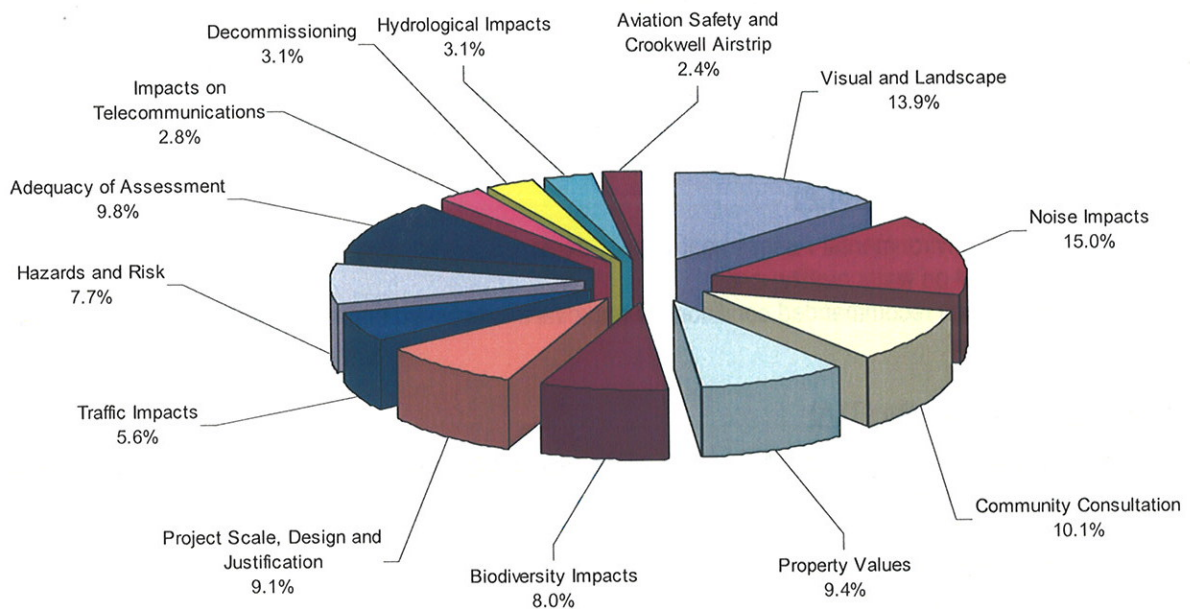
The Department has met all relevant statutory requirements applicable to the environmental assessment process. Under section 75J of this Act, the Minister may now proceed to determine the application.

4. CONSULTATION AND ISSUES RAISED

The Department received a total of 70 submissions in relation to the project. Of these, 59 were submissions made by community groups and the general public, and the remaining 11 were made by local, State and Commonwealth Government agencies.

Of the public submissions, 52 objected to the project (88%) and seven indicated in-principle support (12%) subject to key issues of concern being addressed and resolved as part of the environmental assessment process. In relation to Government submissions, only the Upper Lachlan Shire Council explicitly expressed opposition to the project, with other agencies not objecting to the proposal subject to issues of concern being addressed. Issues raised in submissions are summarised in the pie chart below.

Figure 5 - Issues Raised in Submissions



4.1 Submissions from Government Agencies

There were 11 submissions received from Government agencies at local, State and Commonwealth levels. Issues raised by these agencies are summarised below.

NSW Department of Environment and Climate Change (DECC)

- Raised issues concerning the impact to biodiversity, threatened species, Aboriginal heritage and project specific noise issues. Initial submission did not comment on these issues as it was felt the Environmental Assessment provided inadequate information for an assessment;
- DECC required revised assessment of mitigation options; and
- Recommended conditions of approval in relation to appropriate vegetation offsets for a "worst case scenario" impact, further field survey effort for the Powerful Owl and turbine infrastructure alteration in the potential Grassland Earless Dragon habitat.

NSW Rural Fire Service (RFS)

- Raised concerns about the operational impact to Crookwell Airstrip. States that the RFS ability to provide a rapid and effective response to bush fires will be inhibited if the proposal is approved; and
- The airstrip is also an integral part in state wide training of ground and air crews. The RFS does not want this to be impacted.

NSW Department of Water and Energy (DWE)

- Requested details of proposed groundwater bore;
- Details of the volume of water and time period required to utilise water from the nominated bore as well as estimated bore capacity;
- Details of the surface water sources which are to be used to supply water and a nominated volume; and
- Specific details of water source location, purpose of use and property from which it will be obtained.

NSW Department of Primary Industries (DPI)

- Requested that Proponent consult with mineral exploration licence holder as there is potential for conflict in relation to site area; and
- If site access tracks cross any waterways the proponent is required to obtain a permit for Dredge and Reclamation.

Hawkesbury-Nepean Catchment Management Authority (HNCMA)

- The Environmental Assessment does not adequately identify the conservation values of native vegetation present in the development area;
- Impacts of the proposed development on native vegetation are lacking in detail. Therefore the extent of environmental impacts cannot be accurately determined; and
- Mitigation measures on native vegetation are generally vague and non-specific.

Sydney Catchment Authority (SCA)

- Believes the Environmental Assessment cannot demonstrate the development will achieve a neutral or beneficial effect on water quality; and
- However through recommended conditions of approval it is believed that neutral or beneficial water quality can be achieved.

Roads and Traffic Authority (RTA)

- Has no specific concern with the project other than adequately managing traffic impacts during the construction phase.

The Upper Lachlan Shire Council

- The Council objected to the proposal on the grounds that the wind farm will have considerable impact on current and future use of the Crookwell airstrip; and
- The proposal will not comply with the Council's Development Control Plan (DCP) for wind farms, specifically the inadequate amount of the Community Enhancement Program and the wind farm location is within the minimum distance from dwellings suggested in the DCP.

Goulburn Mulwaree Council

- Provided no objections to the wind farm;
- Asks that construction traffic be controlled through consultation with the Council and RTA;
- Supports landscape mitigation as discussed in the proposal; and
- Supports the Community Enhancement Program with priority given to residents within 5 kilometres of the site.

Civil Aviation Safety Authority (CASA)

- Crookwell Airstrip is not covered under CASA's legal jurisdiction and hence has no comments to provide regarding the proposal.

Department of Defence

- Has no concerns with the proposal after having assessed the safety of military flying operations and possible interference to defence communications and radars.

4.2 Submissions Report

Upon review of the submissions received, the Department directed the Proponent to prepare a Submissions Report. The Proponent's response to submissions did not lead to any changes to the project, as such a Preferred Project Report was not prepared. However minor changes to the Proponent's Statement of Commitments were introduced to address concerns raised in submissions. The Submissions Report (including finalised Statement of Commitments) was made publicly available on the Department's website and a copy provided for comment to the Department of Environment and Climate Change (DECC). The Department has considered DECC's and other agencies' recommendations in formulating recommended conditions of approval for the project. A copy of the Submissions Report is provided as Appendix C to this Report.

